

ABSTRACT

An electrically-controlled valve is formed by electroactive polymers and more precisely an electrically controlled fluidic valve separating two volume spaces, which includes at least one microporous membrane, the surface of which is at least partly covered with at least one electroactive polymer essentially placed within the pores of the microporous membrane, so that, when the polymer is in a defined oxidation-reduction state and the valve is in closed state in an electrolytic salt solution comprising an ion having high steric hindrance, the polymer blocks off the pores; and an electrical supply intended to allow the valve to switch from the closed state to an open state, and vice versa, by changing the oxidation-reduction state of the electroactive polymer.